

CLAIMS

What is claimed is:

1. A charging device comprising:

a battery;

a first induction coil coupled to the battery; and

an induction core extending through the first induction coil, wherein the induction core has a portion which extends in an outward direction from the charging device and is adapted to removably couple with a second induction coil of a portable electronic device by extending into the second induction coil.

2. A charging device as in claim 1 wherein the portion of the induction core comprises a movable charging clamp section.

3. A charging device as in claim 1 wherein the portion of the induction core comprises a movable cantilevered section.

4. A charging device as in claim 1 wherein the charging device does not comprise an electrical connector with electrical contacts for connection to an external power source.

5. A charging device as in claim 1 wherein the battery comprises a rechargeable battery, and the induction core is adapted to induce current in the first induction coil to charge the rechargeable battery.

6. A charging device as in claim 1 wherein the battery comprises a rechargeable battery, and the charging device comprises two systems for charging the rechargeable battery, a first one of the two systems comprising the induction core for inducing a current in the first induction coil for recharging the battery, and a second one of the systems comprises an electrical connector connected to a housing of the charging device and electrically coupled to the rechargeable battery.

7. A charging device as in claim 1 further comprising a switch connected between the battery and the first induction coil for controlling whether the battery is charged or whether the battery is allowed to discharge.

8. A charging device as in claim 7 further comprising a DC/AC converter coupled between the battery and the switch.

9. A charging device as in claim 1 wherein the portion of the induction core is pivotably movable relative to a housing of the charging device.

10. A charging system for a portable electronic device comprising:

a charging device as in claim 1; and

a first battery charger comprising a plug adapted to be connected to an electrical outlet and an induction loop section having a hole adapted to receive the induction core in the hole, wherein the induction loop section is located on the portion of the induction core.

11. A charging system as in claim 10 further comprising a second battery charger comprising a plug adapted to be connected to an electrical outlet and an electrical connector adapted to be connected to an electrical connector of the charging device to thereby couple the battery to the second battery charger.

12. A method of charging a portable electronic device comprising steps of:

charging a first rechargeable battery in a first charging device, the charging device comprising a first induction coil coupled to the battery and an induction core extending through the first induction coil; and

coupling a second induction coil of the portable electronic device to the induction core such that the induction core is located in the second induction coil,

wherein the first battery of the charging device can charge a second rechargeable battery in the portable electronic device by induction through the single induction core.

13. A method as in claim 12 wherein the step of charging the first battery comprises connecting a second charging device to the first charging device, the second charging device comprising a third induction coil which is located onto the induction core, the third induction coil being connected to an electrical plug which is adapted to be connected to an electrical outlet.

14. A method as in claim 12 wherein the step of coupling the second induction coil of the portable electronic device to the induction core comprises locating a support loop on the portable electronic device on a cantilevered portion of the induction core.

15. A method as in claim 14 wherein the step of locating the support loop on the cantilevered portion of the induction core comprises moving the cantilevered portion of the induction core from a first open position to a second closed position relative to a housing of the first charging device.

16. A method as in claim 15 wherein the step of moving the cantilevered portion comprises the cantilevered portion of forming a charging clamp which is adapted to clamp the support loop to the first charging device at the second closed position .

17. A portable electronic device comprising:

- a housing having a housing support loop extending outward from the housing, the support loop being adapted to support the housing by suspension on another member;

- a rechargeable battery located in the housing; and

- a signal indicator extending along an elongated length of the support loop, wherein the signal indicator is adapted to visually signal at least one characteristic of the portable electronic device.

18. A portable electronic device as in claim 17 further comprising an induction coil connected to the battery, the induction coil extending through the support loop

with a hole of the support loop being located in a center path of the induction coil.

19. A portable electronic device as in claim 17 wherein the at least one characteristic comprises a charge level of the battery.

20. A portable electronic device as in claim 17 wherein the at least one characteristic comprises a charging state of the battery.

21. A portable electronic device as in claim 17 wherein the signal indicator is adapted to indicate the at least one characteristic by a color or a shading change of the signal indicator.

22. A portable electronic device as in claim 17 wherein the support loop comprises a wrist strap.

23. A portable electronic device as in claim 17 further comprising a switch on the housing which is adapted to actuate the signal indicator.

24. A portable electronic device as in claim 17 further comprising means for automatically activating the signal indicator upon a predetermined event.

25. A battery charger comprising:

a plug adapted to be connected to an electrical outlet; and

an induction loop section having a hole adapted to receive an induction core of a device to be charged, the induction loop section having an induction coil coupled to the plug, wherein a center path of the induction coil is located at the hole of the

induction loop section, and wherein the induction loop section is adapted to be removably placed on the induction core and surround a portion of the induction core to allow the induction coil to induce current in the induction core.

26. A battery charger as in claim 25 wherein the induction loop section comprises a flexible strap with the hole being a hole surrounded by the strap.

27. A battery charger comprising:

an induction coil;

an induction core extending through a center channel of the induction coil, the induction core comprising a portion extending out of the center channel a predetermined distance;

a power feed section connected to the induction coil for supplying the induction coil with AC voltage; and

a housing surrounding the induction coil and the induction core, the housing comprising a first section adapted to be stationarily attached to a mounting surface and a second section extending outward from the first section, wherein the portion of the induction core extends at least partially along the second section of the housing.

28. A battery charger as in claim 27 wherein the second section of the housing comprises a general oval shape.

29. A battery charger as in claim 27 wherein the second section of the housing comprises a general egg shape.

30. A battery charger as in claim 28 wherein the general egg shape is vertically orientated and a back side of the general egg shape is connected to the first section of the housing.

31. A battery charger as in claim 27 wherein the second section comprises at least two cantilevered beam sections extending from a connection section with the first section of the housing.

32. A battery charger as in claim 31 wherein the two cantilevered beam sections extending in generally opposite directions from each other.

33. A battery charger as in claim 27 wherein the second section extends outward from the first section in a general cantilevered fashion.

34. A charging system for a portable electronic device comprising:

 a charging device comprising:

 a rechargeable battery;

 a first induction coil coupled to the battery;
 and

 an induction core extending through the first induction coil, wherein the induction core is adapted to removably couple with a second induction coil of a portable electronic device by extending into the second induction coil;
 and

 a first battery charger comprising a plug adapted to be connected to an electrical outlet and an

induction loop section having a hole adapted to receive the induction core in the hole.